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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/686,270	10/16/2003	Yong-Hyun Lee	45533	7218

7590 08/09/2005

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EXAMINER	
BORKOWSKI, ROBERT	
ART UNIT	**PAPER NUMBER**
2182	

DATE MAILED: 08/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/686,270	LEE, YONG-HYUN	
	Examiner	Art Unit	
	Robert Borkowski	2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 October 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

It appears to the examiner that "a moving image codec unit 55 " refers to element --65-- in Fig. 3. The incorrect element numbers are located in the following paragraphs: paragraph [0005] line 9, [0012] line 1, and [0013] line 4.

It appears to the examiner that "the memory stick 50" refers to element --500-- in Fig. 3. The incorrect element number is located in the paragraph [0035] line 24.

It appears to the examiner that "The key input unit 600" refers to element --700-- in Fig. 3. The incorrect element number is located in the paragraph [0032] line 1. Appropriate correction is required.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: *elements 610 and INSERT in Fig. 3.* Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the

immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters *"610" and "630"* have been used to designate *a control signal element 620.* Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

In addition to Replacement Sheets containing the corrected drawing figure(s), applicant is required to submit a marked-up copy of each Replacement Sheet including annotations indicating the changes made to the previous version. The marked-up copy must be clearly labeled as "Annotated Sheets" and must be presented in the amendment or remarks section that explains the change(s) to the drawings. See 37

CFR 1.121(d)(1). Failure to timely submit the proposed drawing and marked-up copy will result in the abandonment of the application.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 4-5, 8, 11-12, 15, 18-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Landi et al. (U.S. Patent No. 6,163,828).

6. As per claims 1, 8, and 15 Landi et al. teaches a memory control apparatus (column 3 lines 14-16, fig. 2 element 100), adapted to operate with a plurality of digital signal processors (CPU and DSP) (column 3 lines 14-21, Fig. 2 elements 105, 110), the memory control apparatus comprising:

a. a switch (Fig. 2 elements 170+172+174+176+178), adapted to selectively route signals for input to the DSPs from a memory (Fig. 2 elements 115) and for output from the DSPs to the memory (column 3 lines 45-52);

b. a buffer (250+260+255+265+270, and 250+260+255+265), adapted to selectively output to the DSPs memory information indicating that the memory is available (column 5 lines 23-31, line 55 thru column 6 line 7).

c. a controller (Fig. 2 element 120), adapted to control the switch (170+172+174+176+178) to route the signals to and from the memory and DSPs (column 3 lines 26-29, 55-58) and to control the buffer (174+178) to selectively output the memory information (column 3 lines 36-44, Fig. 2, elements 120).

7. As per claims 4, 11, and 18, Landi et al. teaches the switch includes a plurality of selection switches, coupled between the DSPs and the memory, which are controlled by the controller (column 3 lines 55-58, Fig. 2 elements 130, 140, 150, 170, and 180).

8. As per claims 5, 12, and 19, Landi et al. teaches the buffer includes a three-state buffer which selectively outputs the memory information of the memory to the DSPs as controlled by the controller (column 3 lines 61-65, Fig. 2 elements 182, 174, 178).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 2-3, 9-10, 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Landi et al. (U.S. Patent No. 6,163,828) in view of Ono (U.S. Patent

Application No. 2003/0020814) and in view of Wang (U.S. Patent Application No. 2001/0013131).

10. With regards to claims 2-3, 9-10, 16-17 Landi et al. fails to teach wherein the memory is a removable flash memory.

However, Ono does disclose a memory card (Fig. 2 element 77) mounted on the digital camera 10 as a kind of the optional device 76 via the optional device controller 74 (paragraph 0040 lines 8-13). The digital image data generated as a result of image processing by the signal processor (Fig. 10 element 32) is stored or recorded in a predetermined storage region of the memory card (Fig. 10 element 77) via the optional device controller (paragraph 0082 lines 1-14, Fig. 10 element 74). The memory card (Fig. 2 element 77) is used to store compressed data (paragraph 0040 lines 8-13). In addition to storing digital image data the memory card (Fig. 2 element 77) allows the user to replace the memory card with a new memory card (Fig.2 element 77) containing more free storage when the current memory card (Fig. 2 element 77) runs out of free storage before storing additional data or replacing a memory card with a memory card containing compressed data (paragraph 0040 lines 8-13). Inserting a memory card with compressed data (paragraph 0040 lines 8-13) allows the user to read or replay images captured in the memory card 77 via the optional device controller 74 and displaying it on the LCD monitor (Fig. 2 element 102) display (paragraph 0078).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to have modified Landi et al. by the teachings of Ono, because

including wherein the memory is a removable memory card (Fig. 2 element 77). The memory card allows the user to replace the memory card whenever more free storage is needed to store more compressed data or if the user needs to preview compressed data stored on the plugged memory card.

11. With regards to claims 2-3, 9-10, 16-17 Landi et al. and Ono fail to teach wherein the memory information indicates that the memory has been inserted into a port for access by the memory control apparatus.

However, Wang does disclose a controlling device (41) that is able to detect whether a data memory card (49) has been inserted into the memory card plug-in slot (47) or not (paragraph 0034).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Landi et al. to include a controlling device (41) that detects (Fig. 5 element 52) whether a flash memory card (paragraph 0033, Fig. 4 element 49) has been inserted or removed (paragraphs 0032 and 0034). If the data memory card plug-in slot (47) is vacant, an appropriate signal is generated to acknowledge that a data memory card (49) is not available (paragraph 0034, Fig. 5 element 53). On the other hand, if a data memory card (49) is present in the data card plug-in slot (47), the microprocessor (41) can pick up the data information inside the data memory card (49) and generate an appropriate signal indicating that a data memory card (49) is available (paragraph 0032, Fig. 5 element 51).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Landi et al. and Ono by the teaching of Wang, because including a controlling device (41) in a bus arbiter (120 of Landi) that is able to detect whether a data memory card (49) is inserted or removed from the memory card plug-in slot (47), would allow to send a memory information signal from the bus arbiter (120 of Landi) to the processors that a data memory card (49) is inserted into or dismounted from the data memory card plug-in slot (47) (paragraph 0032).

12. Claims 6, 13, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Landi et al. (U.S. Patent No. 6,163,828) in view of Ono (U.S. Patent Application No. 2003/0020814).

With regards to claims 6, 13, and 20 Landi et al. fails to teach a key input unit, adapted to indicate an operation mode; and wherein the control unit controls recording of data in the memory or reproduction of data from the memory according to the operation mode indicated by the key input unit.

However, Ono does disclose an operation unit (Fig. 2 element 110) containing a function setting portion (Fig. 2 element 116). Depending on the status of the function settings option (Fig.2 element 116) the digital camera (Fig. 1 element 10) is in a capture or a playback mode (paragraph 0074 lines 1-4).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Landi et al. to include the function setting portion (Fig. 2 element 116) of the operation unit (Fig.2 element 110) to control

recording of data in the memory (paragraph 0076-0077) or reproduction of data from the memory (paragraph 0078) according to the operation mode indicated by the status of the function setting portion (Fig. 2 element 116). The function setting portion (Fig. 2 element 116) of the operation unit (Fig. 2 element 110) allows the user to specify (paragraph 0045) operation mode by selecting the memory operation mode. Using the function setting portion (Fig. 2 element 116) the user is able to switch and control the operation mode to either a capture mode or a playback mode (paragraph 0074). The user does not have to perform any additional or complicated steps to change between capture and playback modes because the function setting portion (Fig. 2 element 116) is constantly monitored by the internal circuitry (paragraph 0074 lines 1-4). Once the user selects (paragraph 0045) the desired mode of operation through the function setting portion (Fig. 2 element 116) the selected operation mode will be performed.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Landi et al. by teaching of Ono, because including the function setting portion (Fig. 2 element 116) would allow the user to select the operation mode at a glance and it would allow the user to select an operation mode to either record data in the memory or reproduce data from the memory without any additional or complex steps.

13. Claims 7, 14, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Landi et al. (U.S. Patent No. 6,163,828) in view of Ono (U.S. Patent Application No. 2003/0020814).

With regards to claims 7, 14, and 21 Landi et al. fails to teach that one of the DSPs is employed with a digital still camera and another of the DSPs is employed with a digital video camera.

However, Ono does disclose two separate capture signal processors (Fig. 10 elements 32a and 32b) that perform different types of image processing for the corresponding capture signal output from the respective CCDs depending on the types of the capturing optical systems (paragraph 0097, Fig. 10 elements 21a and 21b).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Landi et al. wherein the first capture signal processor (Fig. 10 element 32a) performs predetermined image processing for the first capture optical system (Fig. 10 element 21a) and the second capture signal processor (Fig. 10 element 32b) performs predetermined image processing for the second capture optical system (Fig. 10 element 21b). The capturing optical systems (Fig. 10 elements 21a and 21b) are different from each other (paragraph 0062). The first image capturing optical system (Fig. 10 element 21a) is used for capturing still images and the second image capturing optical system (Fig. 10 element 21b) may be used as a video movie camera for capturing movies (paragraphs 0099 and 0103). Because digital still cameras and digital video cameras might differ from each other, thus still image camera might require a specialized signal processor to perform a specific set of operations where the specific set of operations of the still camera's signal processor might not be sufficient to perform video camera's operations. Thus, employing individual capture signal processor (Fig. 10 elements 32a and 32b)

capable of performing the optimal image processing with a single capturing optical system (Fig. 20 element 21a and 21b) increases the freedom of design and it allows to use the specialized signal processor with the optimal performance for the task of processing signals from the specific capturing optical system (paragraph 0099).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Landi et al. by teaching of Ono, because employing a separate signal processor (Fig. 10 element 32a) with a single capturing optical system (Fig. 10 element 21a) for still image capture and employing a separate signal processor (Fig. 10 element 32b) with a single capturing optical system (Fig. 10 element 21b) for video capture, would allow to use the optimal signal processor for the tasks the processor was designed for.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent No. 3,581,291 Iwamoto et al.

US Patent No. 5,408,627 Stirk et al.

US Patent No. 6,353,678 Guo et al.

US Patent No. 6,405,362 Shih et al.

US Patent Application no. 2001/0033333 Suzuki et al.

US Patent Application no. 2002/0161956 Kanzaki et al.

US Patent Application no. 2004/0218059 Obrador et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Borkowski whose telephone number is 571-272-8626. The examiner can normally be reached on Monday - Friday 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dov Popovici can be reached on 571-272-4083. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Robert Borkowski
Art unit 2182
7/08/2005

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